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THE UNIFIED FIELD

explains the Atmosphere

including the non−layering of O and N

by Miles Mathis

This is another place contemporary geophysicists and chemists pretend to know a lot more than they actually do. That is to say, the textbooks provide answers to most things, but upon closer inspection, those answers aren't very good at all. And, as usual, the scientists know the least about the most basic things. They can report a lot of good data to you, but they can't answer the fundamental questions.

Take this question, for instance: “Why don't oxygen and nitrogen separate out in the atmosphere based on mass or density? Nitrogen doesn't have the same atomic mass as oxygen, and oxygen gas doesn't have the same weight as nitrogen gas, so why doesn't one go above the other, in layers?” This is the common answer, which I quote here from Johns Hopkins University:

Answer: air particles are moving extremely fast (often faster than speed of sound, 350m/s) and never settle out. [Just like vigorously shaking a container with different density particles.] In other words, air is an assembly of innumerable tiny particles in constant and rapid collisional motion.

Yes, that's pretty much the whole answer, or dodge. Sad, isn't it? If that answer were true, it would mean you could outrun gravity. Apparently, according to JHU, all you need to do to create an anti-gravitational device is to keep your object moving faster than the speed of sound. At that speed, not only is your object freely levitated, it also ignores all other rules of gravity, such as the rule that things with more mass have a different weight than things with less mass. Velocity alone allows you to outrun gravitational rules!

Reread the above answer, then ask yourself this: If you vigorously shook a container with different density particles—like pepper and salt, say—do you think gravity couldn't then settle them out? That would imply that gravity doesn't work on things that are shook. If you believe that, I suggest you do some experiments in that vein. They have been done, and the data is negative concerning the outrunning of gravity. You can't outrun gravity, or shake your way out of it. The writers at JHC are trying to misdirect you with this shaking example. Shaking mixes the particles, yes, but it doesn't thereby prevent them from being sorted by gravity. In fact, shaking can actually *help* the sorting, since it allows the particles to get around eachother vertically.

Besides, we know that gases are sorted this way all the time. The mainstream admits it. Weather depends on it. Hot air rises, remember? Heat affects density. The velocity of the air doesn't prevent it from rising relative to cooler air around it. It rises precisely *because* it is being sorted by the field. That scientists at a major university would dare to put such garbage on the internet is shocking. They must think that the entire world has lost its mind.

Another question, asked even less often, is "Why nitrogen and oxygen? Why not fluorine or methane or carbon dioxide?" Fluorine is the 13th most abundant element in the crust, 16 times more abundant than nitrogen. Its weight is 36% higher than nitrogen. We are told that fluorine isn't found in the atmosphere because it is highly reactive, but it isn't reactive with either nitrogen or oxygen (under normal or atmospheric conditions). It would be kept out of the atmosphere under current theory only if the atmosphere were heavily composed of hydrogen. And in that case, it would create HF, in which case we change our first question to "why not HF?" Hydrogen is the tenth most common element in the crust.

I will be told it is because fluorine is commonly locked up in various fluorides in the crust, but this doesn't answer because both hydrogen and fluorine are byproducts of various other reactions, so they aren't anymore locked up than nitrogen. I will be told that water vapor reacts with fluorine gas, knocking out any that is freed, but that would only create *more* HF. In fact, because HF is dissociative, its reaction with water vapor would create both hydrofluoric acid *and* hydronium *and* free fluorine. I admit that the water in the atmosphere would be expected to precipitate out some fraction of any fluorine or HF produced, but can it take all of it? I have never seen any clear evidence it could, especially now that human reactions are freeing so much more fluorine and HF.

I will then be told that HF, being lighter than air, escapes out the top of the atmosphere, where other interesting things may happen to it. And while I will show that is part of the correct answer, it contradicts what we were told about nitrogen and oxygen. Being gases, both fluorine and HF are moving fast. Why does Earth's gravity field separate them out but not O and N? In other words, we are told that because HF is lighter it rises. But N is lighter than O, too. Why doesn't it rise?

Those who don't like this whole argument about fluorine may be more convinced if we look at carbon dioxide instead. Instead of asking, "Why not fluorine?" let us ask, "Why not carbon dioxide?" It is created in fantastic amounts, as we know, by plant decay, by animal respiration, by industry, and by other natural processes. Its weight and density are 58% higher than nitrogen. Why is its concentration only .04%? Yes, plants use it, as well as other natural processes, but that doesn't explain such a low concentration. Our sister planet Venus has an atmosphere of 96.5% carbon dioxide. Why the huge difference? Is it only a matter of plants?

No. As I will show, it is a matter of unified field weight. Yes, this is another problem that will be solved with charge. Remember, I have already solved several atmospheric problems with charge, including the weight of the atmosphere, the buoyancy of gases, and lift on a wing. Charge allows us to solve this one easily as well. The first clue is that nitrogen and oxygen are right next to one another on the periodic table. That has been treated as an accident up to now, but it isn't. It is the main clue. The other big clue is argon, which is the mysterious third largest component of the atmosphere. At almost 1%, argon composes 24 times as much of the atmosphere on Earth as CO2. This is exceedingly strange, since that is 500 times more abundant than the next noble gas, neon. What makes it even more strange is that if you look at the list of elements in the crust, listed by abundance, *argon isn't even on the list*. Nearly all the argon in the atmosphere is radiogenic argon40 from the decay of potassium40. So the argon in the atmosphere isn't even the most abundant isotope of argon in the universe, which is argon36. That is the isotope produced by stars.

Why would the Earth's atmosphere be composed of more radiogenic argon than carbon dioxide, when carbon dioxide is produced in amounts millions of times higher? It can only be because the argon persists while the CO2 doesn't. You will say it is because plants use CO2 and they don't use argon, but that isn't the right answer. Or, it is only part of the answer.

The right answer has to do with weight, not use. The clue from argon is the fact that its atomic weight is a bit more than twice that of nitrogen or oxygen. To persist in the atmosphere, gases have to have the right weight to do so. It is that simple. Carbon dioxide is too heavy to persist over long periods of time, and it falls out. That is why we find more CO2 at lower levels. It is in the process of falling slowly all the time. But argon persists because it is balanced in the unified field.

Amazingly, this explanation is used by the mainstream on occasion, to pad out their other answer. If you search on this question (my first question above, regarding nitrogen and oxygen) on the internet, the first answer on the first listing that comes up is from cjh at *New Scientist*'s "the Last Word."

Because the difference in their weight is too small to allow them to separate at normal temperature and pressure.

That is the correct answer, as we will see, but using current theory it doesn't make any sense. Current theory can't explain *why* it is true. In current theory, the difference in weight *isn't* too small to allow them to separate, and they should separate. It also doesn't explain argon. Using the current model, *any* weight difference should cause a separation. Over thousands of years, any weight difference would be enough to differentiate them according to gravity. Gravity is not imprecise. The field does not normally overlook small differences. If you stand on a scale, it doesn't say you weight "about 100 pounds." No, even a cheap bathroom scale is pretty precise. The real field is nearly infinitely precise, and it is certainly capable of measuring the difference between N and O—**which is a difference of about 14%, by the way.** And argon is 25% more than oxygen and 43% more than nitrogen. Do you really believe the gravity field can't separate them out, based on a 43% difference?

So although the answer does concern weight, current theory doesn't have the theory or the math to explain it—which is why we see such hemming and hawing when the question is asked. I will start gently, by pointing out that this immediately explains why both neon and argon are there. Argon has almost precisely twice the weight of neon, so atmospheric neon must be a loosely bonded neon dimer (diatom), while argon40 is not a dimer. We can even estimate the strength of the neon dimer bond simply by looking at the atmospheric abundance compared to its creation rates. For instance, if we knew argon and neon were created at the same rates, we could tell that the Ne2 only had a 1/500 chance of creating a bond in our atmosphere. That math is still simplified, but it points you in the right direction.

But that leaves us with nitrogen and oxygen, which I haven't got close to explaining yet. If argon is a stable weight in the atmosphere at about 40, how can oxygen also be stable at 32? The math simply doesn't add up, which is why no one has gone where I am about to go. *They gave up too soon*.

My regular readers will say, "Ah, I think I see where you are going with this. But you have shown that the charge field is about .1% of the unified field here on Earth. How can .1% fill a 25% hole?"

Well, our unification is a bit more complex here, because we aren't just adding or subtracting the charge field of the Earth. We have to look at how each element or molecule *recycles* charge through the atomic structure. Since each element does this differently, and does this with more or less efficiency, we have another variance we have to include. For instance, it is already known that oxygen is less reactive than nitrogen, and that they are both far more reactive than argon. To see this from current numbers, we look at ionization energies instead of electronegativity. When I say reactive, I mean that oxygen channels charge a bit less efficiently than nitrogen, and using the current numbers, ionization energy is closer to my meaning than electronegativity.

While we are here, I point out to you that oxygen has a higher electronegativity than nitrogen, but a lower ionization energy. This should have always been seen as strange, considering the way the two are defined. Ionization energy is the energy to remove an electron and electronegativity is the "tendency" to attract electrons. Why are they different in this case? If we set up a simple field to represent them both, wouldn't they follow the same field potentials? Shouldn't a stronger "suction" (electronegativity) create a stronger bond (ionization energy)?

At any rate, we will deal with that later. For now, it is enough to notice that the mainstream already admits that oxygen has a lower ionization energy than nitrogen, contradicting what we are taught about ionization energies increasing as we move to higher groups. See the chart below, where it says that ionization energies increase from left to right. Well, they don't, since oxygen has an ionization energy of 1314 to 1402 for nitrogen. If you go to Wikipedia, you will see they divert you from that by not publishing a similar chart for ionization energies. They give you this nice chart for electronegativity, adding titles that also (wrongly) apply it to ionization energies, then fail to create the real chart for ionization energies. That is curious, to say the least.

v · t · e

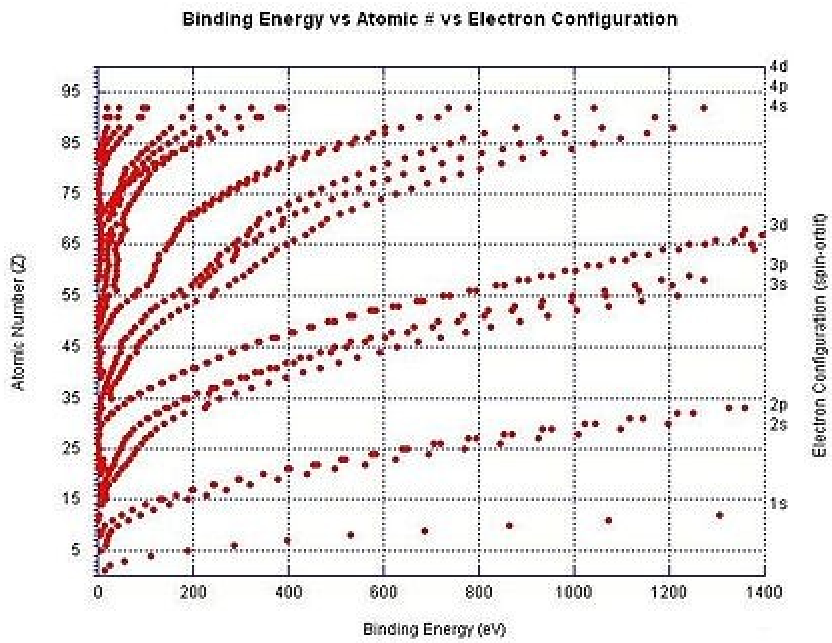
Periodic table of electronegativity using the Pauling scale

→ Atomic radius decreases → Ionization energy increases → Electronegativity increases →

Group →	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
↓ Period																		
1	H 2.20																	He
2	Li 0.98	Be 1.57											B 2.04	C 2.55	N 3.04	O 3.44	F 3.98	Ne
3	Na 0.93	Mg 1.31											Al 1.61	Si 1.90	P 2.19	S 2.58	Cl 3.16	Ar
4	K 0.82	Ca 1.00	Sc 1.36	Ti 1.54	V 1.63	Cr 1.66	Mn 1.55	Fe 1.83	Co 1.88	Ni 1.91	Cu 1.90	Zn 1.65	Ga 1.81	Ge 2.01	As 2.18	Se 2.55	Br 2.96	Kr 3.00
5	Rb 0.82	Sr 0.95	Y 1.22	Zr 1.33	Nb 1.6	Mo 2.16	Tc 1.9	Ru 2.2	Rh 2.28	Pd 2.20	Ag 1.93	Cd 1.69	In 1.78	Sn 1.96	Sb 2.05	Te 2.1	I 2.66	Xe 2.60
6	Cs 0.79	Ba 0.89	*	Hf 1.3	Ta 1.5	W 2.36	Re 1.9	Os 2.2	Ir 2.20	Pt 2.28	Au 2.54	Hg 2.00	Tl 1.62	Pb 2.33	Bi 2.02	Po 2.0	At 2.2	Rn 2.2
7	Fr 0.7	Ra 0.9	**	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Cn	Uut	Fl	Uup	Lv	Uus	Uuo
		* Lanthanoids	La 1.1	Ce 1.12	Pr 1.13	Nd 1.14	Pm 1.13	Sm 1.17	Eu 1.2	Gd 1.2	Tb 1.1	Dy 1.22	Ho 1.23	Er 1.24	Tm 1.25	Yb 1.1	Lu 1.27	
		** Actinoids	Ac 1.1	Th 1.3	Pa 1.5	U 1.38	Np 1.36	Pu 1.28	Am 1.13	Cm 1.28	Bk 1.3	Cf 1.3	Es 1.3	Fm 1.3	Md 1.3	No 1.3	Lr 1.3	

See also: **Electronegativities of the elements (data page)**

Instead, they publish this confusing chart, which not only switches to binding energy instead of ionization energy, it compresses three variations into one Cartesian graph.



They then use the fake electron configurations to make it impossible to find any real information. Can you read the reversal at oxygen from that? I can't.

So lets use the ionization numbers in a new way. We have a 6.7% difference between nitrogen and oxygen. Just to be clear, that is the difference between 1402 and 1314. That's $kJ \cdot mol^{-1}$, but it doesn't really matter, we are only interested in the numerical relationship, which already tells us the relative size. That's interesting, because our mass difference was 14.3%, but the other way. In other words, oxygen has *more* mass, but *less* ionization energy.

That becomes really interesting when we remember that charge *is* mass. If you go to my very first paper on charge, with Ben Franklin sitting pretty at the top of the page, you will find the simple conversion from charge to mass. The Coulomb *already* has dimensions that convert directly to mass, so it didn't take much for me to show it. Of course that applies to kJ as well, since we can convert either by going from Joules to Coulombs, or by converting from energy to mass through various conversions, including Einstein's famous conversion. Either way, we have to include the ionization energy in our analysis of nitrogen and oxygen.

If we do that, we find that ionization energies apply to each atom in the gas. Since there are two oxygen atoms in an oxygen molecule, we double the ionization energy. That gives us a 13.4% difference between nitrogen and oxygen (6.7% x 2). Since the mass difference was -14.3%, we add them together to find a remaining difference of .9%. What that means is that we have gotten rid of most of the unified field difference between oxygen and nitrogen.

A good mathematician or physicist will stop me here and say, “Wait, that math only works if the mass field and charge field are the same size. You are assuming not only that mass and charge are interchangeable, you are assuming they are sized one to one.” That is correct, which means we need one more step in our math, to size the charge field in this problem to the matter field. So far this problem has eluded an answer, or even detection. But I have found the easy shortcut to solving it. Watch this: If we go to the definition of the Ampere at any mainstream source, we find

$1A = 2 \times 10^{-7}N/m$
$1C = 1A(s)$
$1C = 2 \times 10^{-7}Ns/m$

Then I simply do a simplification of dimensions:

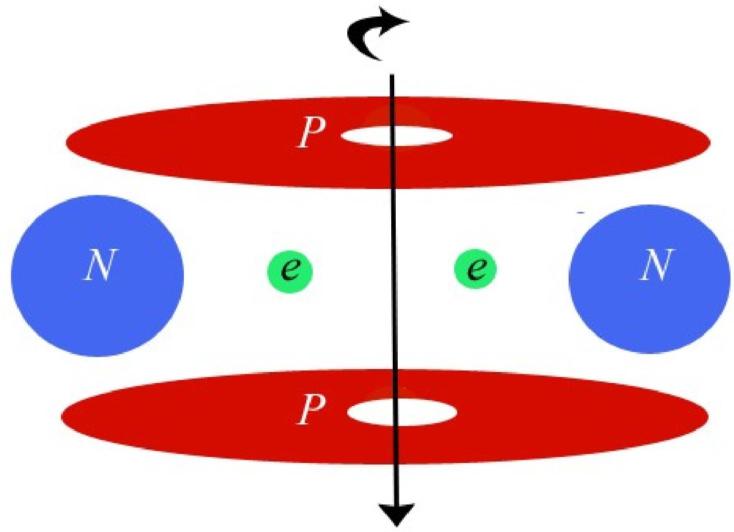
$1C = 2 \times 10^{-7}kg/s$

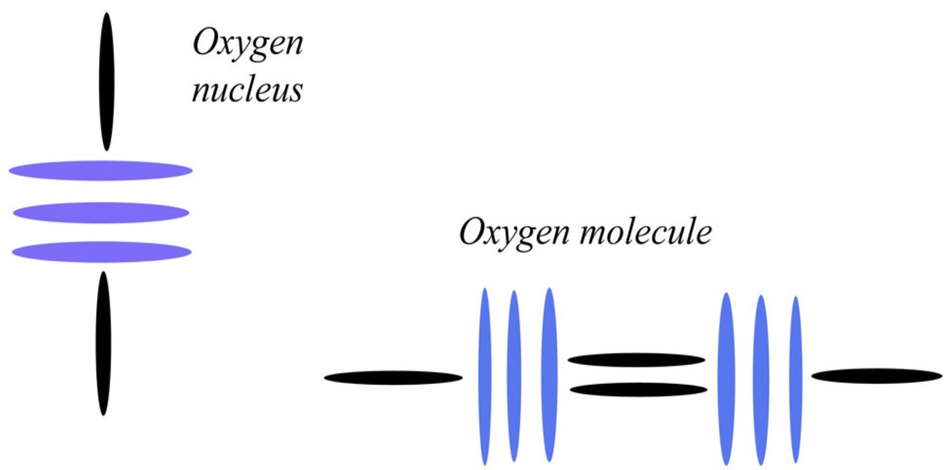
Then I make one further substitution:

$e = 1.602 \times 10^{-19}C$
$e = 3.204 \times 10^{-26}kg/s$

Since that last amount is 19.19 times the mass of the proton, we may deduce that the proton is recycling 19.19 times its own mass in charge every second. Which means that the charge field is 19.19 times larger than the single proton mass “field”. However, in our current problem, we don't just have one proton recycling charge. With nitrogen gas we have 14 protons and 14 neutrons present, all channeling charge in some way.

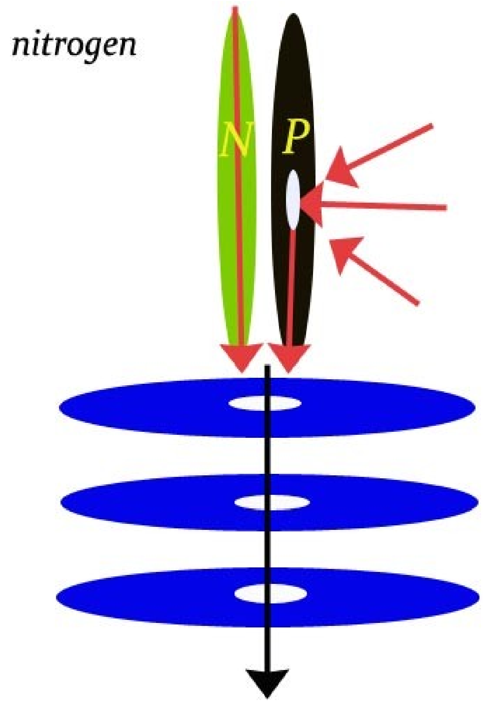
I have published the above math before,* but we are required to go into new theory now, since we have to ask exactly how much charge channeling neutrons are capable of. In my nuclear diagrams in previous papers, I have mainly used them as stoppers or posts, while admitting that they do more than that. But now we must at least estimate how much charge channeling they do. Otherwise we can't hope to get a final answer here. When we pursue this question with more detail in later papers, we will find that it depends upon the neutrons' position in the nucleus, but with nitrogen and oxygen, we find them only in two positions: either they are in standard positions in alphas (as below), or they are paired with an outermost proton, pulling charge into the axial holes. In the alphas, they are positioned with their equators parallel to the proton equators. This allows their charge field emission—which is polar—to act to keep the protons apart and from interfering with one another. But since the neutron poles are now aligned to the axial charge movement, they can also channel charge along parallel corridors. In other words, in this position they divert part of the charge that the protons would otherwise have channeled equatorially. Since smaller nuclei like nitrogen and oxygen don't have carousel levels, no bonding is taking place along those equatorial channels, and the neutrons are completely free to divert a part of the charge in those channels back to the axial channel.





So, what I am saying is that we allow the neutrons in the first diagram to channel down with the axial level, following the direction of the drawn arrow. We could draw smaller black arrows down through the neutron axes. Neutrons channel through their poles rather than equatorially, but they are able to channel. The question is, how much do they channel? Well, it is pretty simple to estimate, simply by following the diagram of the alpha. If each proton channels half the charge axially and half equatorially (due to the configuration of protons here, which is pole to equator), then each neutron can only channel half the remaining charge, for the same reason. This means that each neutron *in that position* is channeling ¼ the charge the proton above it is channeling.

What about the other neutron of nitrogen, which is in the top hole with the black proton. I haven't been drawing the neutrons in the nucleus, to simplify my diagrams, but that is where it is. Why is it there? As with the neutron positions in the alpha, the neutron is there to stabilize the proton. The single proton in that position is sticking out in the charge wind—bound from only one side—and unless the charge wind is blowing straight down from the north (as diagrammed above), the proton is going to be vulnerable. A charge wind from the side can and will dislodge it. Two baryons in the hole fill the hole much better, creating a stronger bond. The strongest bond is two protons in that blue hole, but a proton and a neutron is also stable. In either case, the charge wind is blowing down through both baryons, creating a double bond. The two baryons will also have a lesser charge linkage side to side, gluing them together, but we will study that in a later paper.



In this position, the neutron is perpendicular to the proton next to it in the hole. The proton is sideways, with its equator pointing down through the axis of the nucleus, while the neutron is standing up, with its poles aligned to the nuclear axis. This is the way the two particles channel, because that is the way the charge field move through them—due to the way they stack their four spins. So the neutron is taking in charge from the north, via a vortex, and the proton is doing the same thing to the east. We won't do the full math here, but I think you can see that the proton will be taking in more charge than the neutron, simply due to the given set-up. If we let charge come from all directions, then you can see that the neutron is blocked from more directions than the proton is. They are both blocked from their own backsides, but the neutron is also blocked from the side (by the proton). The proton is open three sides while the neutron is open two sides. In one plane, the neutron takes 2/3 as much as the proton, so in three planes it takes about .3. That is just an estimate, since there are minor mechanical complexities we are still overlooking; but as usual it gets us started.

[Some will not understand my diagram, and will say that they both appear to be blocked equally. But although I have drawn them both as disks, to simplify the diagram, they aren't. The proton is really a sphere, which puts its intake hole well beyond the edge of the blue disk. So although the proton is blocked from behind by the neutron, it isn't blocked from below by the rest of the nucleus. Charge from the south here can easily reach the intake vortex of the proton. The proton is blocked only from the west. The neutron, however, is blocked from the south not only because the rest of the nucleus is there, but also because its intake is to the north. It is also blocked to the east by the proton. Yes, the neutron can pull some charge around the proton, but it is still far more blocked to the east by the proton than the proton is by the rest of the nucleus to the south.]

Now we just have to combine all the neutrons in nitrogen. We have six at .25 plus one at .3, which gives us .257 on average. So if we combine 14 protons (in nitrogen gas, remember) each recycling 1 parcel of charge, and 14 neutrons each recycling .257 parcel of charge, our total charge is 17.6. All these baryons are recycling the *same* charge field, and that charge field we have already calculated at 19. Therefore, the charge field running through nitrogen gas is 19/17.6 = 1.08 times the matter field present. So we go back to our first numbers. We have to multiply the charge difference by 1.08, which gives us 1.08 x 13.394 = 14.4655. The mass differential was 14.29, which brings our difference between oxygen and nitrogen down to .176%. That is .00176.

Some will still not comprehend that math, so I will try to walk you through it. If we compare the charge field present to the mass field present, as a matter of size, we only have to include the mass present that is actually responsible for the measured charge. We got the number 19.19 from *e*, remember, so if any matter were present not contributing to *e*, we wouldn't include it in our mass field. I have found that charge outweighs *the proton* by 19.19, and that is because *e* applies in current theory to the proton charge. The fundamental charge doesn't currently have anything to do with the neutron. For instance, if we assumed that neutrons were not channeling at all, they wouldn't contribute to *e* at all, and therefore wouldn't come into the charge equations (as currently). We could ignore the mass of those seven baryons completely. But since I have shown we must include the neutrons as charge entities, we have to include them in the right way. If we wish to include the mass field of the neutrons in *e*, we have to include only as much mass as produces charge. So if the proton is given a charge of 1 and the neutron is given a charge of .257, we can include only .257 of the mass of the neutron as "charge-producing mass." Yes, the neutron actually channels charge through its entire body, but that is not what the equations represent. Because the proton was assigned a charge of 1, pretty much arbitrarily, we have to do the math like this. You see, I am transforming bad given numbers into more complete numbers, and to do that I have to keep in mind the original assignments of the numbers.

We were able to do all that because the ionization energy is a straight function of charge. True, it isn't explained that way in current theory. Current theory imports a lot of math and lingo to muck up the problem, keeping you from studying it mechanically. But in my theory, it is the charge field that is responsible for any and all atomic and molecular energies, including of course things like binding energy, ionization energy, and electronegativity. In other words, the nucleus channels charge through its protons and neutrons, and each element will channel differently, due to its makeup. Each nucleus channels with a different strength, and this different strength is what we are measuring with ionization energies and so on. Current theory is correct that electrons are bound by this energy, but each electron is bound to a certain proton in the nucleus, not to some orbital level above the nucleus as a whole. To understand more about this, you should have read my long papers on nuclear construction and atomic bonding.

But we still have argon to consider. Argon has 25% more mass than the oxygen molecule, so to make it work with my theory I need to show argon has 25% less charge moving through the nucleus at any one time. This looks like a problem if we stick to ionization energies, since argon is given an ionization energy of 1521—even higher than nitrogen. However, we know that can't be telling us what we want to know here, because we know that argon is pretty much inert or non-reactive. We were using ionization energy as the best number from current data to represent charge field strength. But that isn't what argon's number stands for here. Why not? Well, because argon's ionization energy is a measure of the energy required to remove a top-level electron. But argon's top-level electrons aren't in the same level as oxygen's or nitrogen's. Even current theory admits that. So if we try to use this top-level energy to indicate charge channeling strength, it won't work. Argon's number isn't comparable to that of oxygen or nitrogen. Intuitively, what we should find with argon is a charge channeling that is very weak. It is this weak charge channeling that prevents bonding. So argon's number can't be more than that of oxygen or nitrogen. It has to be much less. Pauling gave argon a zero or very small electronegativity, to represent this weakness, but that won't work either. You see, current theory doesn't really have a number that directly represents charge field strength at the nuclear boundary. Ionization energy is closer than electronegativity, since top-level electrons are actually positioned quite near the nuclear boundary. But it doesn't work with noble gases, for the reason I just told you.

So we are in new territory now, with no easy data we can take from existing tables (that I know of). However, from the given data, we can make some simple predictions. The first prediction is that charge is moving through argon at a rate about 25% less than the rate of charge moving through oxygen and 43% less than the rate of charge moving through nitrogen. Of course this prediction is what is called back-predicting. We know that argon must have considerably less charge than oxygen, due to its reactivity, and I am just *guessing* that amount is 25%, because that then explains why argon is in the atmosphere. Argon is in the atmosphere because it has the same unified field weight as oxygen, nitrogen and neon.

I will be asked to clarify the mechanics here. How is this charge filling the hole in the equations, precisely? It is filling it because charge has mass or mass equivalence. It is real photons moving through the nuclei, and each photon has mass equivalence. Therefore, if nitrogen is recycling more photons per second than oxygen, then *in some situations*, those photons have to be counted as mass in the unified field. If they are counted, then nitrogen's unified field mass gains more than oxygen's unified field mass. I have shown that if we include charge, oxygen and nitrogen weigh very nearly the same.

I will be asked, “What do you mean by 'in some situations'? That sounds a lot like a hedge.” It isn't a hedge, since I can explain it mechanically. For gases to persist in the atmosphere over long periods of time, they have to be weightless, which means the unified field has to balance very nearly perfectly. This isn't true with anything else. Take a rock on the ground. No balance in the field is being maintained, since the rock isn't levitating. With everything on the ground, gravity overbalances charge by a very large margin (over a thousand times, at normal density). For this reason, any imbalance in charge recycling among objects can be ignored. It simply doesn't matter. It is thousands of times too small to matter. To cause any measurable motion, the charge recycling differential would have to be on the order of 1000 or more, and elements and molecules don't have differentials like that. But when we are looking at gases in the atmosphere, which *are* levitated and therefore in unified field balance, we have to consider these small charge imbalances. Since any imbalance will cause a failure of levitation, we have to consider all imbalances, including the small imbalance of charge recycling. That is what I just did, showing it explains the unified field equality of nitrogen, oxygen, neon, and argon.

What about carbon dioxide? Well, we can already see that it has a basic weight of 44—4 more than argon. To balance, it would need to have a charge field 10% weaker than argon. Carbon dioxide is fairly inert, but is it that inert? I would guess not. It may be weaker than argon in atmospheric conditions, but I doubt it is 10% weaker. If it were, then the atmosphere would have a lot more of it. We can be thankful that CO_2 *doesn't* balance in the Earth's atmosphere, because if it did, we would have big problems, even bigger than we have now.

To see this in more detail, we can visit Venus, which will confirm my math and assumptions here. What would it require to make CO_2 balance? A stronger charge field or a weaker gravity field. We know that Venus can't have a stronger charge field, both because it is smaller than the Earth and spinning more slowly, and because we have measured its electrical and magnetic fields. They aren't stronger, and the mainstream knows that. So we look to gravity. Since CO_2 is too heavy for the Earth, we need to lower the gravity field to balance it. Well, that is just what Venus has. Its gravity is .9 that of the Earth, which matches my math above. I showed that CO_2 is 10% too heavy for the Earth, Venus has 10% less gravity, so Venus should have the perfect unified field to levitate CO_2. As long as Venus has a method of producing CO_2, we would expect its atmosphere to contain a lot of it. And, in fact, it has 96.5% CO_2.

We can use the same math on Mars. Mars has a gravity .376*g*. What gas has a weight 1/.376 that of argon? That would be an inert gas with a molecular weight of 106.4. That is about the atomic weight of palladium. Since there are no common gases that match that profile at Martian atmospheric temperatures, we have a simple explanation for Mars' tenuous atmosphere. Most of Mars' atmosphere is CO_2, we are told, but on Mars it doesn't fall, it rises. We can see the plume behind Mars as its atmosphere is blown off into space. We are told the Solar Wind blows it off, but we now know that it would blow off even without the Solar Wind. CO_2 and the other Martian gases are simply too light for the unified field of Mars. In other words, Mars is too small to have *ever* had a permanent atmosphere. That is, unless you can compose a gas at 106.4.

Now Jupiter. Jupiter's gravity is 2.53*g*. Therefore we seek an inert gas with a molecular weight 1/2.53 that of argon. Or 15.8. That would almost fit monatomic oxygen, but Jupiter has no way to keep oxygen from bonding. Methane is very close, at 16; as is ammonia, with a molecular weight of 17. And, in fact, this is what we find. We are taught that the atmosphere of Jupiter is mainly hydrogen gas and helium gas, but these are just passing through. The percentages are so high only because Jupiter is casting off so much hydrogen and helium at all times. Jupiter is *made* of hydrogen and helium, remember, and it has no real surface, so the H_2 and He_2 shouldn't be considered permanent atmosphere. They are part of the transient atmosphere that is moving up rather quickly through the more permanent atmosphere of methane and ammonia.

Now Saturn. Saturn's gravity is 1.065*g*. I pause to point out how curious that is once more. Saturn has much more mass than the Earth and a much greater radius, and yet the gravity is about the same? As I have pointed out in many previous papers, that means *g* must be a function of density. But Newton's gravity equation doesn't have any density variable in it. It has no way of including a variation in density. This has created untold confusion, as I have shown.

At any rate, this difference in *g* is the reason Saturn and Jupiter have such different atmospheres. Saturn can't maintain a methane or ammonia atmosphere like Jupiter, since these gases tend to move up on Saturn. Trace amounts of methane and ammonia have been detected, we are told, but this is only because Saturn has some production of the gases, not because they persist. It has been estimated that Saturn has about the same concentrations as Jupiter, but I would guess this is false. Unless Saturn is producing a lot more methane and ammonia than Jupiter, its atmosphere cannot maintain the same concentrations. On Jupiter, they balance, but on Saturn they don't. It would be like trying to balance methane in the Earth's atmosphere.

Rather, we would expect—at first glance—that Saturn's atmosphere would support the same gases as Earth, including oxygen and nitrogen. But let's check that. Because of its huge mass, Saturn would actually be recycling about 63 times as much charge as the Earth (M x D). It is emitting that charge into 83 times as much surface area, which gives us 1.3 times less charge density on the surface. Due to the gravity on Saturn, we would be looking for gases that weigh about 37.6, not 40. But since there is less charge density in the lower atmosphere of Saturn, the unified field weight of gases there would be somewhat less than here. If there is less charge available, all gases will be channeling less charge. Therefore, if we added 8 units of charge to O2 on the Earth to get 40, we would add only 6.15 [8/1.3] to O2 on Saturn, to get 38.15. Therefore, O2 and N2 are fractionally too heavy for Saturn, by about 1.5% (assuming N2 and O2 balance perfectly here). Still, if Saturn is producing O2 and N2, we should see it in the atmosphere. We know that N is present, since we are told that ammonia is present. Since we are told water ice is present, O should be present.

It is curious that Saturn is such a mystery. Wikipedia tells us,

The quantity of elements heavier than helium [in the atmosphere] are not known precisely, but the proportions are assumed to match the primordial abundances from the formation of the Solar System.

Based on what? What planet's atmosphere is determined by primordial abundances? I will be told that the lower atmosphere of Saturn is hard to see, due to cloud cover in many layers. Fair enough, but we have been able to penetrate the clouds of Venus. Why not the clouds of Saturn?

I will post another curious fact about Saturn here, one most people don't know. Saturn is the same optical size as the Earth, as seen from the Sun. Most will say, so what? No one is living on the Sun to see that, so who cares? But it is interesting not because of any visual viewpoint, but because it means that Saturn is capturing the same cross section of Solar influence the Earth is. This is another way that Saturn is like a larger version of the Earth.

At any rate, we currently have much better data on the makeup of the upper atmospheres of the big planets, which is to be expected given the flybys and the machines onboard. We can read pages on clouds and aerosols at high altitudes, but we have almost nothing on the lower atmosphere. Everything is a big extrapolation from data, and includes many assumptions based on almost nothing. Remember, we were very wrong about Venus, and we could be equally wrong about the surface of Saturn. In other words, Venus is a lot hotter than we thought it would be, due to trapping of heat by clouds; and the clouds of Saturn may be much more efficient at trapping heat than we think. Our current estimates for the surface temperature of Saturn hover around -140 Celsius, which seems very inhospitable. But, remember, this is based on a heating by the core model, not a heating by charge model. Because Saturn's internals are thought to be very different than the Earth's, physicists assume Saturn is not generating the internal heat the Earth is. But if we switch to a heating by charge model, we see that Saturn has only 23% less charge density on the surface. So while Saturn may have less internal heating due to lower density, the surface heating may not be that much less than the Earth. Using simple math, we find that Saturn gets 9.45 [the radius differential] times less heat from sunlight, over the same area. But since I have shown that only a fraction (around 15%) of surface heat is caused by external heating (the rest being from internal charge recycling), that doesn't matter so much. The 9.45 number is less important than the 1.3 number.† If we assume Saturn must get most of its heat from charge recycling, then we would expect its surface temperature to be roughly 23% less than the Earth. That gives us an estimate of -55 Celsius, not -140. That isn't much colder than Canada in the winter. If we add heat trapping by extreme cloud cover, as on Venus, we can bring that up even more, perhaps into the lower middle range of Earth.

But all that was admittedly speculative. No more speculative than current theory, but let us move on. I have explained why N and O don't separate, so now I will look at their relative concentrations. It is known that N has a concentration of 78%, and O of 21%. That gives us a 3.7 to 1 ratio. How do we explain that? Well, three main factors are at work in atmospheric concentrations: 1) rate of production, 2) length of use cycle, 3) length of balance cycle. The first concerns how much of the gas is released into the air by the surface (or, in some cases, created by atmospheric reactions). The second concerns how much of the gas is used up over a given time. The third concerns how much of the gas falls out of the atmosphere over a given time. If we sum these three factors, we can calculate how much of the gas should persist in the atmosphere relative to other gases (giving us what is called a residence time). Since I have just shown that N and O are equal as regards number 3, we can ignore that. If that were the only factor, the ratio would be 1 to 1 or 50/50. This simplifies our calculations somewhat, since it leaves us with only two remaining factors. We can immediately see that if oxygen were produced at 100 times the rate of nitrogen, nitrogen's use cycle would have to be 370 times longer than oxygen's. If oxygen is produced at 10,000 times the rate of nitrogen, nitrogen's use cycle would be 37,000 times that of oxygen. And so on. This is how the atmosphere has so much nitrogen. It didn't drift in from outer space or get pulled off an asteroid. It simply persists better than other gases. It is in better balance than any other gas except oxygen, and it isn't used nearly as quickly as oxygen. It has a much longer cycle. Since a lot of oxygen is produced and used, my second set of numbers is much closer to the truth than the first set. Nitrogen's use cycle is orders of magnitude longer than oxygen's, which means that very little nitrogen has to be produced to maintain even 78% levels.

The mainstream already knows this, since the cycle time of nitrogen is said to be 24 million years compared to 4,500 years for oxygen. Since that is a factor of 5,300, it implies that oxygen is produced at 1,440 times the rate of nitrogen. Notice that it *doesn't* imply that nitrogen is more stable regarding weight. It only means that nitrogen is produced and used much more slowly.

Surprisingly, and perhaps counter-intuitively, if oxygen production *and* use went down, the percentage of oxygen in the atmosphere would actually *rise*. In that case, N and O would move toward equilibrium, or 50/50.

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In my next paper, I will apply this new theory to CO2, showing how it affects this denser gas' cycle in the atmosphere.

†If surface heating can cause 50C changes on Earth, they would cause 5C changes on Saturn (roughly). So more of the heat on Saturn will be due to charge recycling.
*In several papers, actually, including a discussion of that /s.
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